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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,745	03/22/2004	Yasuhiro Koyanagi	44471/298687	9577
23370 7590 04/06/2007 JOHN S. PRATT, ESQ KILPATRICK STOCKTON, LLP 1100 PEACHTREE STREET ATLANTA, GA 30309			EXAMINER BRUNSMAN, DAVID M	
			ART UNIT 1755	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/06/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/805,745

Applicant(s)

KOYANAGI, YASUHIRO

Examiner

David M. Brunsman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 12-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 March 2007 has been entered.

Applicant's remarks filed with the request are treated below. Examiner notes applicant's reliance on paragraph numbers identifying the portions of the specification intended to support his arguments is misplaced. The English language specification of record does not include paragraph numbers and perusal of the published US application fails to identify a correspondence between the paragraph numbering of the response and that of the published application.

Claims 1-15 are pending in the application. Claims 12-15 are withdrawn from consideration as nonelected without traverse. Claims 1-11 have been amended in applicant's response.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the invention commensurate with the scope of the instant claims. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims are based on a disclosure which is not enabling. Subject matter critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

The instant specification fails to set forth the range of proportions of titanium oxide, kaolin, plastic raw material and thickening agent useful in the instant invention or the manner by which one

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of ordinary skill in the could determine said ranges. The instant specification fails to disclose or suggest the materials operable as the "binder" or the manner by which one of ordinary skill in the could determine them. The instant specification fails to disclose or suggest the materials operable as the "thickening agent" or the manner by which one of ordinary skill in the could determine them. The instant specification fails to disclose or suggest the materials operable as the "plastics raw material" or the manner by which one of ordinary skill in the could determine them. (The example at page 33 of the specification appears to refer only to figure 14 and even then does not provide the relative proportions of components therein. The instant specification fails to describe how "high" in protein said protein powder must be and provides no teaching by which one of ordinary skill in the could determine those protein powders that would be useful. The instant specification fails to disclose or suggest the relative proportions of water, caustic soda, high protein powder, polyvinyl acetate and glycerin or the manner by which one of ordinary skill in the could determine them. The instant specification fails to disclose or suggest the materials operable as the "ceramic powder" or the proportions thereof or the manner by which one of ordinary skill in the could determine them. The specification description of ceramic powder "and the like" is insufficient to determine the parameters of what characteristics are necessary to fall within the scope of the invention. There is no teaching in the instant specification instructing one of ordinary skill in the how the normally insoluble materials of the instant claims including titanium oxide, aluminum oxide, kaolin and ceramic powder may be made water soluble as required at page 24, line 18.

Applicant's response, page 6 of 9, paragraphs 3 and 4 argues that the specification describes two examples of the binder (blended with waste paper and blended with charcoal). This appears to correspond to the "First Example of the Binder" and "Second Example of the Binder" Page 9, paragraphs [0137]-[0141]. Neither of these actually describe the "binder" but, rather materials mixed with a "binder". Nor do they appear to identify the thickening agent, titanium oxide, plastic raw material, aluminum oxide, caustic soda, high-protein powder, polyvinyl acetate, glycerin or ceramic powder components recited by the instant claims. While the "First" and "Second" "Embodiments" of the specification may refer to the "Third Embodiment" it is unclear how the "First Example of the Binder" and "Second Example of the Binder" corrects the deficiencies by merely including the word

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"binder". Paragraph [0152] of the published application indicates that the "binder according to the third embodiment is made of sodium silicate, potassium silicate, silicon dioxide, amorphous silica, bentonite and a plastic raw material" This disclosure fails to set forth the proportions of each ingredient, that ratio of alkali metal to silica for the silicates, the particle sizes of any ingredient or the manner by which they are to be combined. Nor, is it clear that this disclosure is any more than a single example of the possible binders to be used. The use of a broad, function based term such as "binder" to represent a narrow mixture requiring at least seven different components is repugnant to the meaning of the term. If applicant intends that the term "binder" in the instant claims be so limited, it should be clearly and explicitly set forth in the claims and on the record. Similarly, that paragraph is unclear if it is limiting the use of "plastic raw material" to a composition requiring clay powder including kaolinite and charcoal or is just disclosing one narrow example. Nor does this disclosure set forth the proportions of each ingredient of the plastic raw material, the particle size of the charcoal or the manner in which it is combined. Again, if applicant intends that the term "plastic raw material" in the instant claims be so limited, it should be clearly and explicitly set forth in the claims and on the record.

In the next paragraph of applicant's response (see page 10, lines 7-10) applicant asserts a different definition of the "plastic raw material" as requiring halloysite, quartz, montmorillonite and illite without identifying which definition is being relied upon. Applicant appears to reproduce paragraph [0115] of the published application as defining the scope of the relative proportions of thickening agent, titanium oxide powder, kaolin powder and plastic raw material. Again, this appears to be an example without explanation how it would enable the vastly larger scope of the instant claims. Applicant is reminded that claims broad enough to cover a large number of compositions that do not exhibit the desired properties fail to satisfy the requirements of 35 U.S.C. 112. See, *In re Cook*, 169 USPQ 298; *Cosden Oil v. American Hoechst*, 214 USPQ 244; *Liebel-Flarsheim v. Medrad* (Fed. Cir. 2007). Merely reciting a desired result does not overcome this failure. *In re Corkill*, 226 USPQ 1005.

In applicant's next paragraph it is pointed out that Figure 15 discloses the components of a high protein powder. Again, it is unclear and repugnant to the use of the terms in the claims that the

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instant invention is limited to this one example. Nor, does the figure describe the species of protein, lipid or glucide employed or identify its source that one of ordinary skill in the art may make of use the invention. Applicant then argues that "ceramic powder" can be silica sand, alumina and titanium dioxide. It is not set forth how an example of this three component mixture can be extrapolated to any ceramic or ceramic like powder with reasonable expectation of achieving the basic and novel characteristics of the invention. Applicant's argument that "and the like" is used to indicate that the ceramic powder is not limited to the list of materials provided illustrates the problem with the instant claims! One of ordinary skill in the art is neither able to determine the actual scope of the claims as written, nor would be able to select those mixtures of ingredients reasonably likely to produce the desired results when practicing the invention without undue experimentation.

Applicant's next paragraph is in response to examiner objection that the specification does not describe how normally insoluble materials may be made soluble. Applicant argues claim 1 does not expressly recite a water soluble material. However, applicant has explicitly relied upon the "first embodiment" as enabling the instant claims. If the first embodiment is not sufficiently described for one of ordinary skill in the art to practice it, it cannot be relied upon to teach that same one of ordinary skill in the art to practice the invention of the instant claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-11 are incomplete for failing to positively recite an "incineration" step. Applicant's amendment fails to remedy this deficiency by using the word "if". The claims have been properly construed in light of the specification and prosecution as claiming the material after being heated at an ignition temperature of 700 C. In accordance with MPEP 706.07(h), any claims submitted that would be independent and distinct from the previously claimed and examined invention will be withdrawn from consideration and not entered. Were the instant claims to be so construed, no claims would be left under examination. The originally submitted claims recited elemental % only measured upon

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incineration by X-ray analysis. Claims including within their scope a product in the precursor form would be nonelected. The term "high" is indefinite as it is relative to an unexpressed comparison. The term "ceramic powder" as defined by the original specification is indefinite in that its scope includes material "and the like" which render it impossible to determine the metes and bounds of the term without recitation of the characteristics that are necessary for a material to be "like". The scope of the claims is indefinite for failure to define in the claims or in the specification supporting them the scope and meaning of the terms "thickening agent", "plastic raw material", "adhesive", "high-protein powder", "ceramic. The ranges of potassium recited in claims 10 and 11 in relation to silicon conflict with the bulk ranges of potassium and silicon in claim 1, from which claims 10 and 11 depend.

Applicant's amendments have raised additional issues of indefiniteness. There is no antecedent basis for "the incinerated coating material". For purposes of examination it has been construed as the coating material after being heated at an ignition temperature of 700 C". "The coating material" recited in the preamble of each of claims 2-11 is of unclear antecedent basis. Claim 1 includes, at least, the possibilities of and incinerated coating material, a dried (but, not incinerated) coating material, a non-metal coating material and the coating material formed by mixing but, not yet dried.

Starting at line 10 of page 8, applicant relies upon the arguments with respect to the first paragraph of section 112 to answer the second. Examiner has addressed applicant's argument with respect to being indefinite as they were raised. With respect to the amendment replacing "the mixture powder" the examiner's objections on which the rejection is based is withdrawn. The amendment to claim 7 removes examiners objection to the range of iron content. Claims 10 and 11 are not consistent with claim 1. For example the maximum proportion of potassium in relation to silicon is 0.5%. The maximum amount of silicon in the finished composition is 30%. The maximum amount of potassium allowed by claim 10 is $0.005 \times 0.30 = 0.0015 = 0.15\%$, i.e. less than the minimum of 1% required by claim 1.

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In conclusion, one of ordinary skill in the art is neither able to determine the actual scope of the claims as written, nor would be able to select those mixtures of ingredients reasonably likely to produce the desired results when practicing the invention without undue experimentation.

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Brunsman whose telephone number is 571-272-1365. The examiner can normally be reached on M, Th, F, Sa; 7:00-5:30.

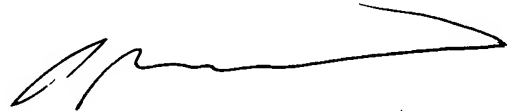
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David M Brunsman
Primary Examiner
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DMB

A handwritten signature in black ink, appearing to read 'DMB', with a long horizontal stroke extending to the right.